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THE
BROAD GAUGE
The Bane of the
GREAT WESTERN RAILWAY
COMPANY.
WITH
AN ACCOUNT OF THE PRESENT & PROSPECTIVE LIABILITIES
SADDLED ON THE PROPRIETORS BY THE PROMOTERS
OF THAT PECULIAR CROTCHET.

By E. S. D.

"A barbe de fol, on apprend à raire."

[Which, being translated for the benefit of Country Gentlemen, means]

*"Mr. Brunel has learnt to shave on the chin of the
Great Western Proprietors."*

THIRD EDITION.

LONDON:
JOHN OLLIVIER, 59, PALL MALL.
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CHAPTER THE FIRST.

INTRODUCTORY.

Peculiar style of management of the Great Western Railway Company—Cause of this—Its peculiar Gauge.

THE great railway question of the day is undoubtedly that of the Gauges—a question in respect of which there can be no neutrality on the part either of established or of embryo companies ; for to all of them the final settlement of the matter at issue is fraught with consequences, prospective as well as present, of no slight importance. On the one side stand alone the Great Western Railway and its tributaries—on the other is arrayed a host of lines occupying almost every district of the kingdom, the peculiar locality of the broad gauge scarcely excepted. In commencing, therefore, a series of chapters on this very important subject, it may be desirable to remind our readers that it is impossible fully to

discuss the question without more frequent and more minute *personal* reference (if we may be allowed the phrase) to the affairs of the Great Western Railway Company than would be necessary in the case of other Companies, did the matter under consideration involve only some minor, though it might be very important, points of internal policy.

The broad gauge is not the only peculiarity of the Great Western Railway Company. The mode of its management is peculiar. In no railway is there so little of the mercantile element, and so much of the political element, as in the Great Western Railway. In states, the origin of this state of things may, ordinarily, be traced to an ambitious and aggressive spirit, the means by which it works being crafty negotiation and deep-laid plots; and, without wishing to apply hard terms to the Great Western management, we must say that its affairs have always appeared to us to be conducted more in the style of a small political state than in that of a great mercantile concern. To us it has ever seemed intent upon squeezing the smaller lines within its power, such as the Cheltenham and Great Western and the Bristol and Gloucester, and seizing every opportunity of encroaching upon its neighbour's frontiers at any risk, rather than careful to cultivate

its own resources and its own internal economy, or mindful of the good old maxim of commerce, "Live and let live."

In accordance with this policy, we believe there are few Directorates in which the letter-book is more often consulted, and the ledger more seldom; few Directorates in which the capacity of handling that potent weapon—the coat-button of a member of Parliament—is more prized. The Bristol section of the board, consisting, for the most part, of mercantile men, has, it is notorious, almost ceased to exercise any control over the proceedings of the Company. A power has grown up behind the throne, greater than the throne. Within the last two years, this policy has become most clear in its manifestations, so much so that the stoutest advocates of things as they are at the Great Western Board, have ceased to deny it. A course has been entered upon, full of danger, we are convinced, to the proprietors—a downward, hazardous, and desperate course—which (if the proprietors do not now take measures to check it) will precipitate the concern into a bottomless pit of debt, embarrassment, and loss, of which the burden will not fall upon those who now hold the reins, but upon the thousand innocent and confiding shareholders

who have invested their earnings and property in the undertaking.

It is the part of wise men to learn from the experience of others, and it must be admitted that the political system of managing a railway, which we have been remarking upon, is exactly the opposite of the commercial system which has been found to answer in the north. It is the reverse of the mode pursued by the most successful railway leader of the day, Mr. Hudson, whose principle has invariably been to adhere to *cheaply constructed* lines—*economical* management—the cultivation of local traffic lying in the proximity of the lines, and to enter into mutually advantageous arrangements with all neighbouring companies. Often, indeed, have his terms in transactions of this nature appeared, to his colleagues and to ourselves, too liberal; and as often has his unexampled success disarmed censure.

It was in Lancashire and the north that railways first arose, and are still, we believe, best understood. There they are not made barren arenas for “smart” and able negotiations, but well cultivated fields, bringing forth abundant fruit to their owners. The interest of the proprietors, rather than the aggrandizement of the concern, is the point always kept in view.

It is the same sensible way of regarding a railway as a mercantile investment intended for mercantile purposes, which we wish to see prevail on the Great West of England Railway as prevailed on the Great North of England Railway, where the value of the shares have risen in one year from 98*l.* to 230*l.* We should far rather hear the partisans of the Great Western boasting of strength in the exchequer, than as they now do of strength in power of parliamentary jobbing.

One of the principal objects in the series of papers which we propose to give, will be to take a fair and comprehensive view of the state and prospects of the Great Western Railway, as a mercantile concern—to inquire into the cause of the false position into which the proprietors are being led, and to suggest the step which we are satisfied is now demanded to put them in a safe position, and one which will enable them to benefit by the change in the railway system which is now being worked, and to which if they do not conform themselves, they will infallibly be most serious sufferers in all time coming. We pledge ourselves to prove that the state of the affairs of the Great Western Railway is such as imperatively to demand inquiry ; we engage, in the course we recommend, to look at the interests of the Great Western proprietors with a single eye to

their safety and profit, totally disregarding the popularity or unpopularity of the course we recommend with the management of the Great Western, or with that of any other Company, whether friend or foe.

The shareholders have some reason to be alive to the position of their affairs. Notwithstanding the boasted triumphs in Parliament last year, the shares of the Great Western Company went down from 230*l.* in August last to 145*l.* in December; and there they now are, although 5*l.* per share, on which a dividend is receivable, have been paid up since August. The unsubstantial character of such victories as those of last year, cannot be better exemplified than by a fall of 85*l.* per share occurring in three months—a circumstance, we believe, unprecedented in the history of railway stock! Could such an event take place in a sound state of affairs? Can victories thus appreciated in the market be worth the expenditure of talent and treasure to obtain? But what is the particular circumstance which has caused this panic in the shares of the Great Western Company? An effect must have a cause. What is the cause in this case? what has occurred? The answer is obvious. The only event to which such an effect can be attributed, is the Gauge Inquiry Commission ap-

pointed to ascertain how *uniformity* of gauge can best be arrived at. “ Ay, here’s the rub ! ”

We think the position of the Great Western Railway, as regards the gauge, is one which affects the property most prejudicially, and will affect it hereafter still more prejudicially than it now does. We think their peculiar gauge has done them infinite mischief—has put them to an enormous expense—has led them into a false position and a false policy—and this without any one corresponding advantage in a mercantile point of view, or so far as the proprietors are concerned. We regard it as the *fons et origo* of the evils which are besetting this important railway ; and, moreover, we are satisfied that whatever be the mischiefs it may have done hitherto, they are nothing compared to the evil, loss, and embarrassment it will entail upon the property if a certain course, said (with some ground apparently for the assertion) to be the prompting of one or two ambitious and ill-judging advisers of the management, be adhered to.

The peculiarity of the Great Western gauge, and the isolation of the line from its neighbours, which results from the peculiarity of gauge—the war-to-the-knife with all narrow-gauge companies, to which it pledges the concern—the necessity of aiming at a separate territory, im-

practicable to obtain in these days—the impossibility of union with any of their neighbours, on the generally prevailing gauge, or of establishing a reciprocation of traffic with them—the impracticability of others altering their gauge, however desirous they may be to co-operate with the Great Western, specially instanced in the case of the Grand Junction last year—the clumsiness of the system, and its utter want of adaptation to an extended branch line or local traffic—and last, not least, the enormous load it has thrown, and throws, on the capital account, whatever casuists may say — these are the burdens which are pulling the Great Western Railway down, and which must make themselves more and more felt, if the broad gauge be extended, as the railway system develops itself.

This mischievous distinction of gauge is the small black cloud in the horizon which was seen by men of business-like foresight in 1838, when 6000 votes were recorded against persisting in the introduction of the broad gauge—(well would it have been for the property if they had then succeeded in their object) — when Mr. Swift's and Mr. Heyworth's warnings were disregarded, and Mr. Babbage's calculations by machine were preferred ! This is the cloud which has grown and grown, and darkened the prospects of the

Great Western Railway, which might, but for this, have been perhaps the very best railway property in England—this is the cloud which has expanded, and is now closing in the horizon all round, whose shadow, projected into the money market, has brought the shares 85% down per share in the course of three months!

To make this clear to demonstration—to show that what we say has nothing to do with the talk of the mechanical partisans of either gauge, but has everything to do with the welfare and commercial value of the property of the Great Western shareholders, is the object we propose to ourselves in the succeeding chapters on this subject. We feel it to be our duty to speak without fear or favour in the matter, and not to allow commercial realities to be obscured by mechanical speculations, which, in principle, have been abandoned by the very parties who advocated them, and, in practice, have proved themselves expensive fallacies.

Dark as the prospects of the Great Western are at the present moment, compared to what they might be and ought to be—darker as they assuredly will be if a change of measures does not take place—yet there is, we feel certain, and we are glad to feel so, a simple mode of extricating the ship from its difficulties. Circumstances

render its application exceedingly easy at this moment ; and we are not without hope that we may be instrumental, however humbly, in assisting the proprietors in bringing their valuable cargo safe into harbour, through the rocks and shoals of ambition and the quicksands of rash and reckless experiment.

CHAPTER II.

Additional expense of Construction attending the Broad Gauge—Rationale of this additional expense—Superior Curves and Gradients—Essential conditions to the Broad Gauge according to Mr. Brunel—Consequences of this in Extensions with difficult and remote countries—Example of the evil effects in the conditions imposed upon the Oxford, Worcester, and Wolverhampton Railway—The Broad Gauge System not adapted to Extensions—Example of cost of Construction of a Broad-Gauge line by comparison of the Great Western and Grand Junction lines—The former at this day eight years after its opening owing more per mile than the latter has altogether cost per mile—Application of this to the argument touching the folly of extending the Broad Gauge into districts to which Mr. Brunel has stated he did not purpose to extend it.

ON the subject of the additional expense of a broad-gauge railway *per se*, as compared with a narrow-gauge railway, there is much misapprehension, the advocates of the broad gauge contending that there is little difference in point of prime expense. Some they admit, but “some” difference of expense is a vague term. It is easy

on reflection to see how this fallacy arose, and how great a fallacy it is. With this view let us investigate the circumstances which cause the excess of expense of the broad gauge above the narrow in regard to prime cost.

Two lines of railway of the broad gauge are 14ft. wide, and two lines of the narrow gauge are 9ft. 5in. wide, the difference being 4.7, or within 1-in. of the width of another track of narrow-gauge railway. The space between the lines outside the outer rails on each side need only be the same on each gauge, as these spaces are determined by considerations of convenience for repairs, stability, and safety. It is true that Mr. Brunel has made his tunnels 6ft. wider than those of the narrow gauge, but we will assume, as he wishes us, that of this 6ft. a difference of 4ft. 7in. is all that can strictly be charged to the difference of gauge. It may be argued, indeed, that there should be a proportion in the dimensions, and that as the broad-gauge engines and vehicles are heavier than those of the narrow gauge, there should, in order to secure equal stability to the road, be a wider margin in embankments outside the outer rail on the broad gauge than on the narrow. On the other hand, it may be said that the ordinary broad-gauge vehicles do not project so much

over the rails on each side as those of the narrow gauge. If they do not, it is clear the parties sacrifice width in the available platform in the vehicle, which they are not called upon to do. We will, therefore, not enter on these points, but will take the simple ground that the broad-gauge track, being 4ft. 7in. wider than the narrow-gauge track, the works must be 4ft. 7in. wider. In every embankment, cutting, and arch, over which the railway goes, there must therefore be a slice added for the broad gauge 4ft. 7in. wide, and of the vertical depth of the surface of the rails from the natural surface of the ground, in a case of a cutting or embankment, or from the foundation of the arch, in the case of every arch *under* the railway; and in every arch *over* the railway, or tunnel, that arch, or that tunnel, must be of greater span by 4ft. 7in. for a broad-gauge than for a narrow-gauge railway. There must also be a strip of land, at least 4ft. 7in. wide, purchased all along, which amounts to three-quarters of an acre additional per mile.

Where the works are light—the tunnels few or none—the viaducts and bridges also few, and of ordinary height—the land cheap—the greater part of the whole expense of the railway, in short, consisting of the expense of the permanent way, of the fencing, and of the stations—the difference

between the expense of the gauges is proportionately less than where the works are expensive, and the tunnels long and frequent, the bridges and works of art high and difficult. In short, where the works of art of a line of railway would only amount to 6000*l.* per mile, there then would be little more than 1000*l.* difference per mile in the broad gauge *per se*, as compared with the narrow gauge; but where the difference becomes of importance—where the capital is already grievously burdened—where the expense of a narrow gauge is as much as, or more than, the traffic would justify or repay—where the works of art perhaps cost, as they did on the Manchester and Leeds Railway, more than 40,000*l.* per mile, there the broad gauge, *per se*, would throw an additional expense of from 6000*l.* to 8000*l.* per mile upon the concern. So that the broad gauge, *per se*, makes a cheap line a little dearer, but an already expensive line far more expensive than the narrow gauge. It lightly burdens those that can bear a burden—it grievously burdens those already heavily laden. We cannot conceive a system having a worse mercantile operation than this. *It is a sliding scale the wrong way*—the tax increasing as the price of the articles rises.

But it would be an utter fallacy to suppose that the difference in the dimensions of the works in-

dicates the difference in prime cost between a broad and a narrow-gauge railway. A still greater source of increase of expense lies in the superior character of the gradients and curves which, we are told by Mr. Brunel, are the *essential* conditions of the proper working of the broad-gauge system.

To be satisfied of this, it is only necessary to refer to Mr. Brunel's Report to the Directors of the Great Western Railway Company in 1838, written with the view to defend and explain the principles of the broad gauge.

"I take it for granted," says he, "that in determining the dimensions in each case, due regard has been had to *the curves and gradients* of the line, which ought to form a *most essential*, if not the principal, condition. In the report of the Commissioners upon Irish Railways, the arguments are identically the same with those which I used when first addressing you on the subject in my report of October, 1835;" and the Irish Commissioners, Mr. Brunel goes on to say, point out that "the circumstances which limit this increase of gauge are the curves on the line and the increased proportional resistance on inclinations (and *on this account it is stated to be almost solely applicable to very level lines*); and lastly the increased expense, which could be justified only by a great traffic."

"Every argument here adduced, and every calculation made, would tend to the adoption of about 7ft. on the Great Western Railway."

Other passages might be adduced to the same

purport from Mr. Brunel's defence of the broad gauge, but it is unnecessary. It is clear to every one possessing a knowledge of mechanics, that the great weight of the engines and trains of the broad gauge and the long axles require much better gradients and curves to make a broad-gauge railway even as good as a narrow-gauge on inferior gradients and curves ; and that the curves and gradients of a broad-gauge line must be much better than those of a narrow-gauge, before the broad gauge can *possibly* be the better railway. We think that, even with superior gradients and curves, the broad gauge will still be inferior ; but however this may be—and we have no opportunity of testing this opinion, as there is no narrow-gauge railway with anything like such curves and gradients as the Great Western Railway—unless the broad gauge is placed under the condition it demands of first-rate gradients and curves, it is tried under circumstances unsuited to it, and its comparative failure, as compared with the narrow gauge, is to be expected, and has been found to result.

These, then, are the reasons of the greater prime cost of railways on the broad gauge than those on the narrow gauge:—1. The additional width of the works and land telling most severely on the most expensive constructions. 2. The

superior class of gradients and curves which the broad gauge demands.

It is, moreover, these superior gradients and curves, the necessary accompaniments of the broad gauge, without which it makes an absolutely inferior railway to a line on the narrow gauge (as witness the Bristol and Gloucester line, constructed for the narrow gauge but laid down on the broad), which cause it to be a system so peculiarly unadapted to expensive lines as it is. We have shown that, on such a line as the Manchester and Leeds, the works of art and land would have cost not less than from 6000*l.* to 8000*l.* per mile more than they have cost on the narrow gauge, merely from the additional width of the works ; but on that line there are gradients of 1 in 150 for miles, and curves of 20 and 30 chains' radius. These, Mr. Brunel tells us, and reason confirms the statement, "are utterly unfit for the broad gauge—almost solely applicable to very level lines and easy curves." To have secured better curves and gradients in the populous and tortuous valley through which the Manchester and Leeds line passes would have been scarcely possible ; or if possible, we are certain—and all who know the country will bear us out in stating—that 20,000*l.* additional to the 40,000*l.* already

spent per mile would not have covered the expense of the broad gauge on that line of railway.

Now to apply this to the Great Western Railway, where is it stretching itself? Into Cornwall, a proverbially difficult country—and into South Wales, where a line will never pay 2 per cent., unless it be fed by branches, and closely connected with the mining districts lying in the valleys of the South Welsh mountainous coal fields. We have a case in point relating to the locality. We know an engineer who was called upon to take a railway from the South Wales line into one of the most thriving valleys of the South Welsh mining district, abounding in traffic, and who told us that he could not by any contrivance get such curves as he could recommend for the passage of the broad-gauge trains, and that he was at his wits' end on the subject.

But why should we quote any other case bearing upon the unfitness of the broad gauge for the South Welsh district, when we remember that Mr. Brunel himself has already been there, and left lasting and incontestable proof of his opinion as to which gauge is proper for the locality. It was *he* who introduced the narrow gauge on the Taff Vale Railway from Cardiff to Merthyr, and this after he had started the broad gauge; and yet most strange to say, he, the very man who intro-

duced the narrow gauge on the first passenger railway constructed in South Wales, leading from the principal port to the principal seat of the manufacture in iron, is the very person who now proposes to intersect this railway and that district with the broad gauge, to suit the ambitious policy with which that system has become identified! Is this consistent? Is this fair to the proprietors?

The broad gauge is, then, beyond a shadow of doubt, and from Mr. Brunel's own act, proved to be unsuitable to the South Welsh Railway. It is equally so to the South Staffordshire district; and here again we find in the acts of the Great Western Board, and the requirements of the local interests, strange involuntary recognitions of the unfitness of the broad gauge to the country into which it is to be thrust.

It appears that the mining interests in South Staffordshire and the legislature have required both the broad and the narrow gauge to be laid by the Great Western Company between Worcester and Wolverhampton. We shall be told that it is to avoid a break of gauge. Why, that is one of the most obvious proofs of the unfitness of the broad gauge for extension! What has it brought upon the Great Western shareholders in

the district between Worcester and Wolverhampton?

1. An expensive form of railway—the broad gauge itself—when a less expensive form would have been in every respect more suitable for the country.

2. To make up the defects of this expensive form of railway, a second railway, at a vastly greater expense—that is to say, two railways, where one, if upon the narrow gauge, would have been sufficient.

3. An obligation, under the 45th clause in the Oxford and Wolverhampton Act, to find the *best apparatus and machinery, free of charge* for ever to all persons who may wish to transfer traffic from the broad gauge to the narrow, or *vice versa*.

Whether we regard the subject, then, on general considerations, or go into the particular cases in which the Great Western Railway Management are now attempting to extend the broad-gauge system, we find that it entails upon the property burdens of the most fearful description. We find that it is an attempt to make a system general which does not in principle admit of being general; which was projected and defended by its projector as an *exceptional* system, fitted only to *peculiar* circumstances, which can be most rarely met with in railways.

To push it forward as is now proposed, is unfair to the broad gauge—is giving the lie to the mechanical principles—is imprudent in the extreme in a commercial point of view—is a wanton sacrifice of the property of the Great Western shareholders—and is unfair to the public, who suffer for all such waste of capital.

Such are the evils immediately attending the extension of the broad-gauge system ; but if, by an ill fate, that gauge should be extended as it is proposed to extend it by some of its ill-advised friends, the evils will not stop here.

It is found by experience to be a system peculiarly ill adapted to local and way-side traffic, and to the traffic which may be derived from branch lines, or feeders affording small but constant streams of traffic, and amounting in the aggregate, as is now abundantly proved by experience in the north, to a most important part of the whole revenue of railways. The peculiarity of this traffic is the smallness of the individual loads to and from each place. The handfuls of passengers and few balefuls of goods can never be distributed conveniently in the enormous vehicles of the broad gauge. The evidence of many of the greatest carriers, and of the most experienced Railway Managers, given to the Commissioners, is conclusive, in showing that

this description of traffic will not thrive under the broad-gauge system.

Thus gloomy are the commercial prospects of extending the broad gauge. The effect will clearly be to *swell the capital* expenditure, and to *diminish the revenue* receipts. Are we wrong, then, in calling upon the shareholders to look to the course into which it is sought to urge them ?

In order to show, in the clearest and strongest light, the effect of the broad gauge on the cost of construction, it is only necessary to contrast the prime cost of the Great Western and Grand Junction Railways.

Great Western Railway.

Cost of Great Western Railway proper to 31st	
December, 1845	£6,822,982
<hr/>	
Say by Calls	3,554,892
„ Loans	3,268,000
<hr/>	
	£6,822,892*
<hr/>	
Cost per mile, line being $118\frac{1}{2}$ miles . . .	57,820
<hr/>	
Say by Calls	30,125
„ Loans	27,695
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	£57,820

* This sum of £6,822,892 refers to that portion only of the whole expenditure which includes the Great Western Railway *proper*, $118\frac{1}{2}$ miles long. The proportion of the amount raised by loan to the amount raised by calls is taken to be the same as the *total* amount raised by loan is to the *total* amount raised by calls.

Grand Junction Railway.

Cost of Line to date of amalgamation with Liverpool and Manchester Company, Feb- ruary, 1845		£2,477,700
Say by Calls		2,203,300
,, Loans		274,400
		£2,477,700
Cost per mile, line being 103 miles . . .		24,055
Say by Calls		21,391
,, Loans		2,664
		£24,055

Thus it appears that the Great Western Railway, made for the most part through an easy country, has cost, in consequence first of the gauge, and secondly of the gradients and curves, which we have shown are essential conditions to the safe and proper working of that gauge, more than twice as much per mile as the Grand Junction Railway—that *now, eight years after its opening, the Great Western, on the broad gauge, actually owes 3,000*l.* per mile more than the Grand Junction on the narrow gauge has altogether cost*—that so far from creating a revenue for itself, as the theory demanded, in order to justify its huge expenses, its revenue is no more per mile than that of the Grand Junction Railway (for we exclude the London and Birmingham and Liverpool and Manchester Railways, as being more

favourably situated than the Great Western), but that while the revenues are about the same per mile, the Grand Junction is paying what is equal to something like 12 per cent. on nine-tenths of the Company's expenditure, while the Great Western is only paying 8 per cent. on half of its expenditure !

And yet the system of broad gauge, which has proved itself so entirely unsuccessful as regards its commercial results on its own line, under conditions peculiarly suited to it, is the very system which Mr. Brunel and the two other gentlemen who form the Great Western Management, are trying to push into districts utterly unsuited to it, across other lines of different gauge, in consequence of which it can derive little or no benefit from them ; and this, after ten years' experience has shown us that the first grand element in the success of a railway is a line originally cheaply constructed. Why is this gross injustice upon the shareholders of the Great Western to be perpetrated? Because, forsooth, the broad gauge is Mr. Brunel's and Mr. Saunders' child and hobby! The shareholders may well say, "that boy will be the death of us."

But this is no matter for joking. We ask Mr. Brunel, is it fair—is it honourable thus to sport with the confidence reposed in him? Let him

and his colleagues remember that it is not his own money he is spending—it is not even the money of Government, if *that* were any excuse—but it is, for the most part, the money gained by hard work and honest privation.

We put the question more especially to Mr. Brunel, because we believe he has an acute mind and honesty of purpose, although often carried away, as in the present instance, by mechanical enthusiasm, and an abhorrence of taking a step that seems to him like a step backward—although the step forward was most clearly, in the case of the broad-gauge matter, a step aside and in the wrong direction; and the step to uniformity of gauge would put him and the Great Western Railway on safe ground. We appeal especially to Mr. Brunel, because it is the impression among many shareholders of the Great Western Railway Company that others are at his elbow, pushing matters on further than he feels it necessary they should go—others whose element is strife—fish made to swim in troubled waters—who are never so happy as when contesting a point with a committee or a commission, whether it be about locking all the passengers in a carriage, or whether the point be one so obvious to common sense as the evils of a diversity of gauge. We appeal to Mr. Brunel, because he has, in every

other case but that most unfortunate one, the Great Western Railway, recognised the principle of mercantile necessity, and has recommended the narrow gauge as being altogether the best suited for general purposes, both in Italy and South Wales.

In the case of the Great Western Railway Company, he seems to have merely miscalculated—as, perhaps, every other engineer of the day did—the mode in which the railway system would work itself out. It must evidently have been under such a misapprehension that he wrote, in 1838, in his defence of the broad gauge:—

“The Great Western Railway could have no connexion with any other of the main lines, and the principal branches likely to be made were well considered, and almost formed part of the original plan. Nor can they be dependent on any of the existing lines for traffic they will bring to the main line.”

This was a mistake, like Dr. Lardner's prophecies against crossing the Atlantic by steam, or the thousand other little trips which every man of eminence makes in his career. Mr. Brunel has only to acknowledge this, which everybody else in the country admits (always excepting Mr. Saunders and the Solicitors of the Great Western Company), and no more need be said about the

propriety of preserving, much less of extending, the broad gauge.

But we are going away from our subject. The figures we have given form a good introduction to the position of the capital account of the broad-gauge line, *which owes as much per mile as its neighbour on the narrow gauge (earning as much) has cost per mile.* We purpose to apply these facts, and, in so doing, to put before the shareholders the present state of their capital account, and what the state of that account soon will be if matters go on as at present.

CHAPTER III.

Proof of the Commercial value of the Broad Gauge by a comparison of the balance available for a DIVIDEND on three lines—Balance per mile being only half that on Narrow Gauge.

THE following statement shows the amount per half year available for a dividend on various railways :—

	London and Birmingham, Narrow Gauge, 176 miles long.	Grand Junction, Narrow Gauge, 140 miles long.	Great Western, Broad Gauge, 240 miles long.
Receipts, per mile, per half-year	£3,072	£3,109	£2,075
Expenditure, do. do.	997	1,163	818
	32·6 per cent. of receipts.	37·4 per cent. of receipts.	39·4 per cent. on receipts.
Interest and Rent, do.	Nothing.		Interest £287
			Rent, per mile . 202
			489
Balance available for a dividend, per mile, do.	£2,095	£1,946	£768

From this statement several instructive conclusions are to be drawn in regard to the commercial operation of the broad gauge.

In the first place, it shows that the Great

Western Railway, on the broad gauge, on which the fares and charges are at least as high as, or rather higher than, those on the two lines with which we have compared it, is worked at a higher per centage on the receipts than its neighbours ;

The Great Western expenses being 39·4 per cent. of the receipts.

The London and Birmingham expenses 32·6 per cent. of the receipts.

The Grand Junction expenses 37·4 per cent. of the receipts.

Under some circumstances this mode of comparing the economy of different lines is fallacious. This is the case when the circumstances of the traffic of two lines differ widely, and the charges are much higher on the one than on the other. But in the present case, from the length of the Great Western Railway working to Exeter, and the charges for passengers and goods prevalent upon it, the comparison ought for these reasons to be in favour of the Great Western, whereas we see it is decidedly against it.

So much for the comparative working expenses of the two gauges ; but there are other sources of outlay besides the working expenses, namely, the burden on the capital account arising from the borrowed money, originating in the enormous prime cost of the broad-gauge lines ;

and the rents, equivalent, in the case of the Bristol and Exeter Company's rent paid by the Great Western Company, only to a small per centage of less than 4 per cent. of the capital of the Bristol and Exeter Company. Now the borrowed money alone, it will be seen, comes to 287*l.* per mile per half year, or 574*l.* per mile per annum, on the broad-gauge railway—a charge from which the London and Birmingham or Grand Junction is entirely exempt.

We showed in our last number that the Great Western, on the broad gauge, still *owed* 3,000*l.* per mile more than the Grand Junction, on the narrow gauge, passing through a country on the average as difficult as the Great Western, had *cost*. Here, then, we see the effect of this tremendous first cost on the profits of the Company—574*l.* to be deducted from the revenue on every mile of the railway, besides working expenses, before a shilling can be appropriated to dividend!

We have next to deduct the rent of the Bristol and Exeter Railway, not connected with the *broad gauge* peculiarly, except in so far as its amount is fixed, with a view to giving the Bristol and Exeter shareholders a small dividend (less than 4 per cent. per annum) on the capital outlay increased by the adoption of the broad gauge; but it is necessarily deducted in our statement, because we

here give the Great Western credit in the receipts for all they earn on the Bristol and Exeter Railway. When we have made these deductions, we come to the grand result of the statement—namely, the amount left for a dividend on each mile of the Great Western and Bristol and Exeter Railways, on the broad gauge.

What is this result?—for this, after all, is *the* result to which the shareholders have almost exclusively to look; since why do persons invest their money in railways, unless to enjoy dividends from it? This, then, is the result:—

On every mile of the 176 worked by the London and Birmingham (narrow gauge) Railway, there remains applicable to a dividend, after paying all charges upon the revenue, per half-year, the sum of 2,095l.

On every mile of the 140 miles worked by the Grand Junction (narrow gauge) there remains applicable to a dividend, after paying all charges on the revenue, the sum of 2,160l.

On every mile of the 240 miles worked by the Great Western (broad gauge) Railway, the grand trunk line westwards, there remains applicable to a dividend, after paying all charges on the revenue, the sum of 768l.

Or, if we give the Great Western the whole profit on the 76 miles of the Bristol and Exeter Railway which they work, to which they have no real claim, the sum available to a dividend on the

line and branches proper of the Great Western would only be 1,124*l*.

And this is the commercial result of the broad-gauge!

The sum available for a dividend per mile on this improved form of railway is less than half that available for the same purpose on the other (narrow-gauge) trunk lines.

If persons in commercial England will, after this, be absurd enough to allow their money to be spent in promoting a construction of railways producing such results to capitalists as those we have shown to be the result of the *accounts* which cannot be explained away—if they will continue thus to allow their own money to be so thrown away, when they are at the same time told that, by so doing, they are prejudicing the internal trade of their native country, diminishing its capability of defence against foreign invasion, and preventing it from realizing, to a full and fair extent, the benefits which railways are calculated to bestow—we are much—very much, mistaken.

CHAPTER IV.

Exposé of Liabilities saddled on the Great Western Company by the Broad Gauge—amounting, in addition to Liabilities, still undischarged, of Trunk Line, to TWENTY MILLIONS.

IN our last chapter we showed the comparative amount available for a dividend on the narrow-gauge trunk lines, the London and Birmingham and Grand Junction; and on the broad-gauge trunk line, the Great Western. We showed this in what we believed to be the simplest mode of regarding the question, namely, by exhibiting the actual half-yearly receipts, working expenses, and burdens on revenue in the shape of interest. The balance of the receipts, less the outlay, of course gives the net earnings available for a dividend. There can be no sophistry about this.

In that statement it will be remarked that neither the London and Birmingham nor the Grand Junction Railway has to be debited with any interest; while the Great Western has to be debited with 574*l.* per mile per annum. At first sight this may appear to require explanation, as

a sum for interest appears to be charged upon the revenue of each of the Companies in question ; but there is this essential difference in the mode of keeping the accounts of the narrow-gauge and broad-gauge lines :—

In the London and Birmingham and Grand Junction Companies, the dividend is declared on an amount which covers the *whole amount* of the expenditure ; and from this amount interest is deducted on the portion of the share-capital not paid up before the dividend is paid to the shareholders. Thus there is no burden chargeable on the concern on account of interest ; whereas in the Great Western Company the dividend is declared only on the amount *paid up*, which is a little more than half the expenditure, and the concern must therefore be burdened by the interest payable on the remaining half of the expenditure raised on loan. Hence in the cases of the narrow-gauge lines, the receipts, less the working expenses, truly represent the balance available for a dividend ; but not so in the case of the broad-gauge line—*there*, in addition to the working expenses, you must deduct the interest payable on loans.

The effect of this mode of declaring a dividend is of the utmost importance to the shareholders to keep in mind, for it most materially affects the

value of their property ; we will, therefore, dwell upon it for a moment.

To take an instance. The expenditure on the Great Western proper being, as we have shown, 6,822,000*l.*, of which 3,554,000*l.* are raised on calls, and 3,268,000*l.* on loan—supposing capital to be raised to this amount, it may be regarded as composed of 100*l.* shares, on which 52*l.* are paid, and 48*l.* are not called, but raised on loan. The Great Western Company (were its capital composed of such shares) would, according to their mode of keeping accounts, declare a dividend of 8 per cent. on the 52*l.* paid up only ; whereas the London and Birmingham or Grand Junction Companies, according to *their* mode of keeping accounts, would declare a dividend of 10 per cent. on the *whole* 100*l.*, and deduct interest at 4 per cent. on the 48*l.* not paid up. Their dividend would thus be equivalent on the 52*l.* paid up to 14*l.* 11*s.* 9*d.* Thus, while from the different mode of keeping the accounts, the dividends on these concerns would be *called* respectively 8 and 10 per cent., the difference to a man who had invested 100*l.* in each would be that, under the Great Western system of keeping accounts, he would receive only 8 per cent. on his investment, while under the London and

Birmingham or Grand Junction systems, he would be receiving 14*l.* 11*s.* 9*d.* per cent. on his investment, or he would be getting $6\frac{1}{2}$ per cent. on his investment more for the narrow-gauge investment than the broad-gauge investment. And this is precisely what does take place, as we have shown, in the Grand Junction and the Great Western Companies. The shareholders are receiving 12 per cent. on their investment in the Grand Junction (the narrow-gauge line), and 6 per cent. on the other (the broad-gauge line).

The mode of keeping accounts adopted by the Great Western Railway Company is a mere contrivance to keep up their credit, adopted generally by all that class of Joint-Stock Companies who wish to give the impression that their affairs are more prosperous than they really are, and repudiated by Companies whose affairs are in a sound state. It is the old trick of showing large profits on a small capital embarked in a large business, saying nothing about the mortgages ; which method is familiar to all versed in the mysteries of mercantile book-keeping, especially in that particular branch of it which comes under the cognisance of assignees.

To return from the nominal dividend to the real earnings of the broad-gauge line.

We have shown that the earnings per mile for the last half-year,* on the Great Western and its branches, are 768*l.* per mile, to which if we add 202*l.*, the rent paid for the use of the Bristol and Exeter line, we get 970*l.* per mile on the whole line, or

466,000*l.* per annum

as the earnings of the Great Western Railway and its branches (including the profit on the Bristol and Exeter Railway after paying the rent), for which there have been expended 7,758,890*l.*,† the earnings thus just producing 6 per cent. on the capital expended—of which 3,741,000*l.* still remain a debt and burden on the Company.

Now upon a concern thus circumstanced, tolerably weighted apparently, let us see what liabilities its Managers have thought it necessary to fasten.

And first we will commence with the Acts which were obtained last Session, generally at a

* This is a trifle *more* than the half-yearly balance. It may be remarked that, in the half-year previous to that taken, only 1 per cent. on the value of the stock is charged for depreciation, so that the yearly earnings for 1845 cannot be obtained by adding the two half-years together.

† That is upon the Great Western, the Cheltenham, and the Oxford branches only.

great cost—the *spolia opima*—the trophies of the Parliamentary fight—all these lines, be it remembered, being broad-gauge children, and therefore looking entirely for support to their mother of the broad gauge, from whom they derive their origin.

We have found it no easy matter to ascertain with any degree of accuracy the terms of the support offered by the Great Western to its children ; indeed, so vague are the powers taken from the shareholders by the Directors, and the Reports to the shareholders of the agreements entered into by the Directors, that we defy any Great Western proprietor to ascertain within 5,000,000*l.* the liabilities of the concern in which he has invested his property. We have, however, spared no pains to arrive at a substantially true statement. In one or two instances we have found it necessary to assume that an agreement is settled, which may be only pending—as, for instance, when power is taken by the Great Western Company to lease a Company, we have assumed it would be at 4 per cent., and in the present day we think no one will argue that this is an exaggeration.

In the table which follows, we have taken the cost of the line on which the interest is guaranteed

as equal to the amount of capital authorized by the Act to be raised in the way of loan and shares. It is well known that few lines in the country have been constructed for the amounts authorized to be raised in their first Acts ; and this is notably the case with regard to the only broad-gauge lines hitherto constructed, viz., the Great Western, the Bristol and Exeter, the Cheltenham and Great Western, and the Bristol and Gloucester. Mr. Brunel has, moreover, stated before a Committee this session that prices are 50 per cent. higher than when he made his estimates last year. There is, therefore, no doubt that we are much under the mark when we take the cost of the line as equal to the whole amount authorized to be raised in the act.

We show in separate columns—

1. The amount subscribed by the Great Western—that is, the amount to which the Great Western Company, in their corporate capacity, have become shareholders in different concerns.
2. The amount of income guaranteed by the Great Western Company.
3. The amount of capital which that capital represents, capitalized at twenty-five years' purchase.

*Liabilities of Great Western Company beyond its present
Debt of £3,741,000.*

Acts obtained in 1845.	Amount subscribed.	Income guaranteed.	Capital repre- sented by such Income.
Oxford, Worcester, and Wolverhampton, (leased at 4 per cent. on 2,000,000 <i>l.</i>) .	£	£ 80,000	£ 2,000,000
Oxford and Rugby (amalgamated with the Great Western)	.....	.....	800,000
Wilts, Somerset, and Weymouth (leas- ed at 4 per cent. on 2,000,000 <i>l.</i>)	750,000	80,000	2,000,000
South Wales (leased at 4 per cent. on 3,733,333 <i>l.</i>) .	500,000	149,320	3,733,333
South Devon . .	150,000		
Berks and Hants (amalgamated) .	.....	.....	533,000
Monmouth and Hereford (amalgamated) . . .	.....	.....	733,333
	1,400,000	309,320	9,799,666

WE THUS SEE WHAT LIABILITIES LAST YEAR'S SESSION SADDLED ON THE BROAD-GAUGE TRUNK LINE IN THE SHAPE OF BROAD-GAUGE EXTENSIONS. ON A CONCERN WHOSE WHOLE CREATED CAPITAL IS 6,511,400*l.* — BUT WHICH HAS ALREADY COST 7,758,840*l.* (OF WHICH, 3,741,000*l.* HAVE BEEN RAISED ON MORTGAGE), AND WHOSE WHOLE EARNINGS DURING THE LATE GOOD TIMES FOR TRAFFIC, FOR THE LAST AND BEST HALF-YEAR,

ONLY AMOUNT TO 6 PER CENT. ON ITS EXPENDITURE—LIABILITIES TO THE EXTENT OF 9,799,666*l.* WERE ADDED IN 1845 !

And driven on by the scourge of a peculiar gauge which forbids any co-operation with a narrow-gauge line, the managers of the Great Western are clamouring to be allowed to assume still further liabilities (beyond the ten millions we have enumerated) to carry out *more* broad-gauge lines, and through far less productive districts even than those included in the schemes of last year—130 miles—through the heart of the Welsh mountains, to a fishing village, and heaven knows where. For, let the shareholders of the Great Western remark, a company for making a broad-gauge line, we believe, in no one instance has formed itself, except under the shadow of the Great Western Company, promoted by its Directors, designed by its Engineer, supported by its money ; whereas we see on all hands, and every day, narrow-gauge lines spontaneously springing into existence, and fighting rather for independence from the influence of the great narrow-gauge lines than dependence upon them.

Not so, however, with the broad gauge. The broad gauge cannot stand still—it must go on and extend itself, or allow itself to be placed in such a minority (as indeed it nearly stands at

present), that it would have no chance of maintaining its separate and exceptional existence. There is no one to countenance it—no one to push it forward, except the half dozen converts on the Great Western Board, the Engineer, the Secretary, and the Chairman ; but on it must go, and on the shareholders of the Great Western Company must follow it, through fell and through brake—under rivers and over seas—wherever party spirit may call them. Into the wilds of Devonshire or the mountains of Wales, the promoters of the broad gauge (as the Great Western shareholders are coolly designated in the Secretary's attack on the Gauge Commissioners) must be led ; not like ordinary shareholders, who put their money into a railway in the hopes of getting a decent dividend from it. Out on such sordid motives ! The Great Western shareholders are *the promoters of the broad gauge*—the apostles of the new faith—and with every chance, we would add, if they do not look out for themselves, of becoming the martyrs to it, and sealing their fidelity with their blood.*

Now for facts, to show that there is sober truth in what we are saying.

* Money is the blood of a shareholder.—*Printer's Devil*.

*Liabilities of the Great Western sought to be imposed by the
Acts of this Session.*

	Amount Subscribed.	Income Guaranteed.	Capital repre- sented by such Income.
Worcester* and Portdynllaen (estimate, 2,750 <i>l.</i>) . . .	£ 1,000,000	£	£
Exeter and Great Western (to keep off the narrow gauge; to be leased, 4 per cent. on 1,300,000 <i>l.</i>) . . .	.....	52,000	1,300,000
Berks and Hants Extension (to be amalgamated with the Great Western). . . .	.....	.....	850,000
Wilts, Somerset, and Wey- mouth Extension (to be leased, 4 per cent. on 250,000 <i>l.</i>) . . . . .	.....	10,000	250,000
South Wales† (Haverford- west and Milford junction), (to be leased, 4 per cent. on 200,000 <i>l.</i>) . . . . .	.....	8,000	200,000
Oxford, Worcester, and Wol- verhampton Extension (to be leased, 4 per cent. on 600,000 <i>l.</i>) . . . . .	.....	24,000	600,000
Gloucester and Dean Forest (to be leased, 4 per cent. on 350,000 <i>l.</i>) . . . . .	.....	14,000	350,000
Great Western and Uxbridge (to be leased, 4 per cent. on 50,000 <i>l.</i>) . . . . .	.....	2,000	50,000
Great Western and Wycombe (to be leased, 4 per cent. on 150,000 <i>l.</i>) . . . . .	.....	6,000	150,000
North Devon	125,000	.....	.....
Cornwall	50,000	.....	.....
£	1,175,000	116,000	3,750,000
Add subscription . . . .	.....	.....	1,175,000
			4,925,000

* The Chairman of the Great Western Company pledged himself last year, before a Committee of the House of Commons, that the Company would support and carry out this scheme.

† What will the tunnel under the Severn, insisted on by the Admiralty this year, cost?

Besides those lines in regard to which we have been able to ascertain, in pounds, shillings, and pence, the amount of the liabilities of the Great Western Company, there are the following lines in which the Great Western are largely interested, which have the countenance and support of the Great Western — their battles in Parliament having been in several cases already during this Session fought by the Great Western. To what precise pecuniary amount the Great Western Company may be pledged in regard to these schemes we are unable to say—in many cases to a considerable amount, there can be little doubt.

* Lines promoted and supported by the Great Western Company :—

	Capital.
Birmingham & Oxford Junction & Extension	£1,300,000
Cheltenham and Oxford	480,000
Bristol and South Wales Junction	300,000
Worcester, Hereford, Ross, and Gloucester .	750,000
Shrewsbury and Hereford	875,000
&c. &c. &c.	
	<hr/> £3,705,000

Thus the liabilities of the Great Western Company, the earnings of which, as we have shown, afford 6 per cent. (out of by far their best country) on their expenditure, and which owes already 3½ millions, were last year increased by 10,000,000*l.*; and not contented with this, this year additional liabilities to the extent of 5,000,000*l.* certain are

* Some of these lines will, of course, disappear in Parliament; but this has nothing to do with the intentions of the promoters, of which we are now treating.

sought to be saddled on the Great Western (with a contingent prospect of a portion of 4,000,000*l.* more)! So that, since the battle of the gauges, began in 1845, the burdens saddled on the Great Western Railway Company amount to between 15,000,000*l.* and 20,000,000*l.**

To any unbiassed person it is obvious that this enormous burden, enough to break the back of the original Company three times over, is imposed upon the concern in pursuance of that ambitious and aggressive policy forced upon the Company, in order to preserve the isolated position it must ever occupy, until it has the wisdom to give up its exceptional gauge, and adopt one which shall place it in uniformity with the other railways of the country, and in conformity with the national system.

Are the shareholders of the Great Western Railway prepared to have their concern saddled with liabilities amounting to twice the present capital, for the construction of lines on the most expensive system, through districts of doubtful traffic, in order to increase the regal sway of the designer of the broad gauge, and the agents of the Great Western Railway Company, AT THE COST AND RISK OF THE PROPRIETORS?

* That is, between 15,000,000*l.* and 20,000,000*l.*—15,000,000*l.* being certain and positive, and the remainder contingent on the good fortune of the Extension lines.

CHAPTER V.

*The true Policy of the Great Western Proprietors,
which will ensure a Lightened Expenditure, increased
Revenue, and larger Dividends.*

IN our first chapter on the subject of the Great Western Railway Company and the Gauge Question, we promised to take a comprehensive view of the state and prospects of the affairs of that Company, regarded as a mercantile concern, and to inquire into the cause of the false position into which the proprietors are being led; we pledged ourselves to prove that the state of the Great Western Railway Company is such as imperatively to demand the attention of the proprietors—that, within the last two years, a course of policy has been entered upon, the necessary offspring of the broad gauge (cutting the line off as it does from connexion with all its neighbours), full of danger to the proprietors, a downwards, hazardous, and desperate course, which, if the proprietors do not check, will precipitate the concern into a bottomless pit of debt, embarrassment

and loss, the burden of which will not fall upon those who now hold the reins, but upon the shareholders, and upon them alone.

In redemption of this pledge, we have, in the series of articles on the subject which we have lately published, demonstrated in detail, by a reference to published accounts of the Company, and to authenticated figures and facts, the following points.

First, THE GREATLY INCREASED EXPENSE IN THE CONSTRUCTION OF THE WORKS OF A BROAD GAUGE LINE as compared with a narrow-gauge line, even in the works themselves, with the same gradients and curves. We show that this difference of expense operates in the most mischievous manner ; that where the works are light, the tunnels few or none, the viaducts and bridges also few and of ordinary height—the land cheap—the expense of the line, in short, moderate—then the proportionate difference of cost between the broad and the narrow gauge is comparatively unimportant ; but that where the line is on either gauge of an expensive character, and the works of art heavy, the additional expense of the gauge becomes enormous—so that the broad gauge makes a cheap line only comparatively a little dearer, but an already expensive line far more expensive than the narrow gauge. We said, and we repeat,

that we cannot conceive a system with a worse mercantile operation than this. It is a sliding scale the wrong way, the tax increasing as the price of the article rises.

We then show that the expense of the broad gauge is by no means indicated by the difference in the dimensions of the works. A still greater source of increased expense lies IN THE SUPERIOR CHARACTER OF THE GRADIENTS AND CURVES, which, we are told by Mr. Brunel, are the ESSENTIAL CONDITIONS to the well-working of the broad-gauge system. It is the necessity of the broad-gauge arrangement which makes it, as a system, so utterly unfitted for the extension, especially in the difficult counties in which it is sought to be finished. If there be a grain of truth in the arguments on which the broad gauge was defended by Mr. Brunel, it is, to use his own words, suited only to "an almost level country," and to very easy curves. To place it therefore on the lines on which a party in the Great Western Management is now seeking to place it—that is, on lines with most inferior gradients and very sharp curves—is giving the lie to the mechanical principle on which it was founded. Mr. Brunel is stultifying himself by so doing. *The result can only be, that with the broad-gauge, on such line, the public will have a line worse in*

every respect, less safe, less convenient, and less speedy, than would be the case if the narrow gauge were adopted under such circumstances; while the proprietors will be still put to a very great additional expense, in consequence of the increase of cost of the works in such counties, necessary from the increase of gauge alone. In short it is an absurdity to talk of introducing the broad gauge on the extension of the Great Western Railway, as in the South Wales Railway, the Portdynllaen, the Oxford, Worcester, and Wolverhampton, &c.

We next examine THE COST OF THE GREAT WESTERN LINE—the broad-gauge railway, *par excellence*—and we find that, comparing it with a great narrow-gauge line, the Grand Junction, running through a district in which equal obstacles to the formation of a railway had presented themselves, THE BROAD GAUGE LINE HAD COST 57,800*l.* PER MILE, WHILE THE NARROW-GAUGE LINE COST 24,000*l.* PER MILE; that of the 57,800*l.* the sum of 27,700*l.* raised on mortgage is not yet paid off, so that the broad-gauge line at this moment owes more by 3,700*l.* per mile than the narrow-gauge, which does not owe a penny, cost. This difference is attributable almost entirely to the broad-gauge—1st, from the superior gradients and curves aimed at and attained no the Great Western, as being essential conditions

to the broad-gauge ;—and 2ndly, from the increased dimensions of the works attending the increase of gauge.

We pass from this to the COMPARATIVE RECEIPTS of the broad and narrow gauge trunk lines, and to the burden on those receipts, resulting first from the interest of money (the amount of which is connected with the prime cost of the respective lines), and secondly from the working expenses.

The first thing that strikes in the comparison is, that the WORKING EXPENSES PER CENT. ON THE RECEIPTS ARE HIGHER ON THE BROAD-GAUGE LINES THAN ON THE NARROW-GAUGE, although the charges on the broad-gauge are higher than on the narrow-gauge line, and the expenses *per cent.* ought therefore to be lower on the broad-gauge. There is no economy then in working on the broad-gauge as compared with the narrow ; on the contrary, the broad-gauge is the more expensive to work as well as to construct.

The next point that strikes the attention is, that owing to the burden imposed by the interest of the borrowed monies raised to defray the prime cost of the broad-gauge, there is only left out of the receipts available for a dividend 768*l.* per mile per half-year, while in the London and Birmingham (the narrow-gauge line) there is left

2,095*l.*, and in the Grand Junction 2,160*l.* THE COMMERCIAL RESULT OF THE BROAD GAUGE IS THUS TO LEAVE AVAILABLE FOR A DIVIDEND A SUM PER MILE LESS THAN HALF THAT AVAILABLE FOR THE SAME PURPOSE ON THE NARROW-GAUGE LINES.

We now come to the last and most mischievous effects of the EXCEPTIONAL GAUGE of the Great Western Railway Company, WHICH IS THE AGGRESSIVE POLICY IT ENGENDERS.

The broad gauge cannot stand still ; it must go on and extend itself, whether prudently or imprudently, else it will be swallowed up by the narrow gauge, be placed in such a minority (in which, indeed, it nearly stands at present), that it would have no chance of maintaining its separate and exceptional existence. On, then, it must go, in the vain attempt to obtain a separate territory for itself, introducing the most expensive railway into the most unpromising district, and to such a pitch of imprudence has it permitted this, the penalty of its exceptional character, to hurry it, that, as we have seen, the liabilities saddled on the trunk line of the Great Western Railway Company, in the shape of broad-gauge extensions, in one Session alone (that of 1845) amount to 9,799,000*l.*; and, as if to prove that ambition cannot stop short of

ruin, this year further burdens at the lowest estimates to the extent of 4,925,000*l.* are attempted to be added to the capital of the concern. **THUS THE CAPITAL OF A RAILWAY WHICH PAYS, ON THE BEST PORTIONS OF ITS LINE, EIGHT PER CENT. ON FOUR MILLIONS, AND IS NOW MORTGAGED TO THE EXTENT OF THREE AND THREE QUARTER MILLIONS, WILL BE INCREASED, IF THE SHAREHOLDERS DO NOT INTERFERE, TO THE ENORMOUS AMOUNT OF TWENTY-THREE MILLIONS.**

This point we have proved, giving the figures in detail of which we have just stated the general result—figures which are derived from the accounts and reports of the Great Western Railway Company itself, and the Parliamentary documents, accessible to every one who chooses to go into the subject as we have done, and about which there can be no dispute or doubt. We feel that the facts require no comment.

So much for the actual and prospective effect of the peculiar gauge of the Great Western Railway on the trunk line and its extensions. There is another point of view in which the question should be regarded.

We see concurrently, an ambitious and aggressive policy pursued by the Great Western, full of peril to the property, as we believe, and this peculiarity of gauge, to which we have so often

referred. Are these two phenomena connected? Undoubtedly they are. This ambitious spirit is both the cause and the effect of the peculiar gauge. In 1838, when the sensible proposal of giving up the broad gauge crotchet, before much mischief was done (only about 30 miles of the Great Western being opened) was rejected, it was clear that the Great Western Railway Company pledged themselves to a war of extermination and conquest against all neighbours. It was not so clear then what the upshot would be—the narrow gauge lines being then few in number—and if the broad gauge could have shown any practical advantage, there was a good chance that some one else would take it up. But year after year went on, up to the present day, when eight years have elapsed; various railway engineers, various Companies have come forward, but not one solitary person or Company, either at home or abroad, has seen reason to adopt the Great Western crotchet! The advocates of the broad gauge are now, therefore, left to fight the battle themselves at fearful odds. Last year their war of aggression was apparently successful, but this year it will assuredly be followed by a war of reprisals. Already they are threatened on all hands, in front and in rear. The broad-gauge system has been closely scrutinized by three men se-

lected for their impartiality and ability, and it has been found to be practically defective. It is pointed to as the barrier to the attainment of uniformity of gauge, an object national as regards the commerce and defence of the country. The upshot must be one of two evils to the property. The broad gauge will either be hedged into the smallest possible district, and where it has suffered from solitary confinement long enough, and it has been starved, and become penitent, and anxious to conform its gauge to that of the other railways in the country, who will all this time have gone on extending and strengthening themselves, it will be offered some miserable sum towards the expense of altering the gauge, with the alternative of selling itself at its then depreciated value to some more fortunate neighbour. Either this will be the fate of the broad gauge, or it will be given "more rope:" it will go on this year, and perhaps another, pushing a ruinously expensive system of railway construction into districts to which it is admittedly not suited.

One of these two events must happen if the system is adhered to. The former we regard as much the more probable, because by the latter the other railways and the public will suffer as well as the Great Western shareholders, and therefore it is not likely to be permitted; but in

